

REMARKS

Claims 31 to 62 are pending in the application; claims 56 to 62 are withdrawn.

Specification

In the 1st paragraph of page 9 a few obvious errors in regard to the wrongly used numerals have been corrected.

Claim Rejections - 35 U.S.C. 112

Claims 40 and 54 stand rejected under 35 U.S.C. 112, 2nd paragraph, as being indefinite.

In regard to claim 40, examiner states that the limitation “switching flap from the main vales” is indefinite because in claim 38 the main valves are defined as being coupled by linkage and the same linkage is claimed in claim 39 as being further connected to a separate switching flap. Claims 39 and 40 have been rewritten in view of examiner’s remarks based on the disclosure of the specification, page 9, 1st paragraph.

Claim 54 has been rewritten in view of examiner’s remarks such that one chamber is inside the other.

Reconsideration and withdrawal of the rejection of the claims under 35 USC 112 are respectfully requested.

Rejection under 35 U.S.C. 103

Claims 31-39, 41-53, and also 55 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Bates et al.* (GB 241,960).

Claims 31-34, 41, 52, and 54 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Harrington* (US 2003/0221412).

Claim 31 has been amended and now defines that the liquid aspirator comprises:
a housing comprising a receptacle and a lid (Fig. 2, receptacle 13, lid 14);
at least one aspirator motor (3, 4) arranged in the housing;
the receptacle enclosing at least two receiving chambers (1, 2) for liquid;
each of the at least two receiving chambers having an air aspiration opening

(17, 18) that is connected to the vacuum side of the at least one aspirator motor and is provided with a main valve (19, 20); see Fig. 3;

a vacuum connector connected to the receptacle, wherein liquid is sucked into the receptacle through the vacuum connector with the at least one aspirator motor;

wherein a section of the vacuum connector arranged inside the receptacle has for each one of the at least two receiving chambers a separate closeable opening so that the vacuum connector communicates separately with each one of the at least two receiving chambers; see, for example, Figs. 6-9 showing the opening and closing of the flaps 31, 32 at the vacuum connector 15 inside the housing;

a drainage connected to the receptacle through which drainage liquid contained in the receptacle drains from the receptacle;

a control that acts on the main valves so as to alternatingly open and close the air aspiration openings so that the at least two receiving chambers are alternatingly filled with liquid through the closeable openings of the vacuum connector, respectively, and so that one of the at least two receiving chambers currently not being filled is drained.

Bates discloses, according to examiner, a receptacle with two receiving chambers (b) and a vacuum connector (k) connected to the receptacle wherein liquid is sucked into the receptacle through the vacuum connector with the least one aspirator vacuum pump. Drainage or outflow is disclosed in col. 5, line 28, and is connected to the receptacle. Control (p) is provided that controls that the least two receiving chambers are alternatingly filled with liquid and that the receiving chamber that is currently not being filled is drained during the filling action of the other one.

In *Bates*, the vacuum pipe (k) connected to a vacuum pump (not shown) is provided with a slide valve (p) shown in Fig. 5 and from the slide valve (p) two separate vacuum lines E (connected to ports (o) and (k1), respectively) extend to a further valve arrangement (d) (see Fig. 4) at the top of the two receptacles. This so-called vacuum valve (d) comprises a float that with rising liquid level in the receptacle will eventually close off the aperture (q) connected to vacuum pipe (E) while by means of rod (d2) simultaneously ports to the atmosphere are opened to relieve vacuum from the receptacle. This, in turn, causes the bottom valve (n) to be released and at the same time the slide valve (p) to be

switched. The liquid is sucked into the chambers through the pipes (h), (a) and (c). The pipes are connected by flanges to the upper end of the receiving chambers; there are no closure valves closing off the connection between the pipes (h) and (c) and the receiving chambers. The inflow and outflow are controlled by the slide valve (p) and the vacuum valves (d).

Bates does not disclose a housing that is comprised of a receptacle and a lid wherein the receptacle encloses at least two receiving chambers. *Bates* also does not disclose that the aspirator motor is arranged within the housing.

When comparing the arrangement of *Bates* with the invention as claimed, it must first be noted that the vacuum connector (15) of the present invention is the element through which the liquid is aspirated into the receiving chambers. This means that the pipes (h), (a) and (c) of *Bates* constitute the vacuum connector as claimed. Each receiving chamber of *Bates* thus has its own vacuum connector. The vacuum connectors of *Bates* have no section inside a receptacle in which the aspirator motor and the two receiving chambers are disposed; also, there is no section of the vacuum connector arranged inside the receptacle that has for each one of the at least two receiving chambers a separate closeable opening so that the vacuum connector communicates separately with each one of the at least two receiving chambers through the separate openings provided inside the housing. See, for example, Figs. 6, 7, 8, 9 of the instant application where the section of the vacuum connector 15 inside the housing is shown with two openings that are closed off as needed by the flaps 31, and 32 in order to connect to the chamber 1 or 2, as needed.

Also not shown in *Bates* is that the air aspiration openings 17, 18 of the two receiving chambers are disposed inside the housing and connected alternatingly to the vacuum generated by the at least one aspirator motor inside the housing and closed off by the main valves 19, 20 (see e.g. Fig. 3).

The present invention provides a compact apparatus with short passageways for the vacuum and the liquid.

Claim 31 as amended and its dependent claims are therefore not obvious in view of *Bates*.

Harrington is cited by the examiner to show a liquid aspirator with pump that is pneumatically powered as disclosed in paragraph 0018, wherein, according to the examiner, a receptacle 6 with two receiving chambers 10, 26 is provided and the vacuum connector 8 is connected to the receptacle. The examiner further states that the liquid is sucked into the receptacle through the vacuum connector with the aspirator vacuum pump. Drainage 40 is provided for draining liquid from the receptacle. Control 44, 46 controls that the at least two receiving chambers are alternately filled such that the receiving chamber currently not being filled is being drained. The Examiner further argues that it is obvious to provide the aspirator pump with a motor.

It is respectfully submitted that *Harrington* discloses a pneumatically powered fluid pump wherein, during operation of the pump, liquid is drained from a tank 6 into a pump chamber 26 and the chamber is then pressurized to deliver fluid (see concise explanation of the operation in the Abstract). The chamber 26 is then refilled from the main tank 6. Auxiliary chamber 10 supplies fuel while the main chamber is being refilled. The auxiliary chamber 10 is refilled from the tank 6 while the main chamber 26 is delivering fluid. In this way, a steady stream is delivered from the pump. The auxiliary chamber has a smaller capacity than the main chamber so that the main chamber is filled much faster than it is emptied. The smaller auxiliary chamber supplies fluid only during the time while the larger main chamber is being filled.

While there is an alternating filling action disclosed, the structural features of the present invention as claimed are not disclosed.

Examiner states that line 8 of *Harrington* is a vacuum connector. The line 8 is a supply line that pressurizes the auxiliary chamber 10 (see last sentence of para 0020). The chamber 26 also has such a line 14 for pressurizing the chamber; pressurization takes place when the fluid has already been filled into the chambers (note that the pressurizing gas is helium or a gas from a gas generator or nitrogen; see paragraph 0032). The two chambers thus have separate pressurization lines to pressurize the fluid received in the receiving chambers for dispensing ("drainage") through the valves 38, 49. It is respectfully submitted that a pressurization line is not a vacuum connector.

The fluid that is being supplied to the receiving chambers and then later drained through valves 38, 40 is supplied from the surrounding tank 6 through check valves 32 to

chamber 26 and through valve 36 to chamber 10. Thus, the check valves 32, 36 would constitute the “vacuum connector” (as defined in instant claim 31) through which the fluid is supplied to the receiving chambers.

The at least two receiving chambers for liquid do not each have an air aspiration opening connected to the vacuum side of at least one aspirator motor. The system of *Harrington* is based on pressurization and not on vacuum. There is a pressurization pump to pressurize the tanks and receiving chambers but there is no aspiration pump that creates a vacuum and causes aspiration.

The instant claim 31 also defines that a control acts on the main valves of the aspiration openings so as to alternately open and close the air aspiration openings so that the at least two receiving chambers are alternately filled with liquid through the closeable openings of the vacuum connector, respectively, and so that one of the at least two receiving chambers currently not being filled is drained, i.e., when the aspiration opening is released by the main valve a vacuum is created in the receiving chamber and the vacuum in the chamber sucks in fluid through the opening of the vacuum connector.

The “vacuum connectors” of *Harrington*, as explained above, are the check valves 32 or 36 and the correlated “aspiration opening” that causes filling of the receiving chambers through the valves 32 or 36 is the valve 44 or the valve 46 that is turned to a venting position (i.e., the pressure in the chambers is released and the overpressure in the tank is used to fill the chambers); see paragraph 0026 where the operation of the device is explained in detail.

Harrington does not disclose a housing that is comprised of a receptacle and a lid wherein the receptacle encloses at least two receiving chambers. *Harrington* also does not disclose that an aspirator motor is arranged within the housing together with the receiving chambers and the vacuum connector section with two separate openings.

Harrington cannot make obvious the subject matter as claimed in claim 31 and its dependent claims.

Reconsideration and withdrawal of the rejection of the claims under 35 USC 103 are respectfully requested.

CONCLUSION

In view of the foregoing, it is submitted that this application is now in condition for allowance and such allowance is respectfully solicited.

Should the Examiner have any further objections or suggestions, the undersigned would appreciate a phone call or **e-mail** from the examiner to discuss appropriate amendments to place the application into condition for allowance.

Authorization is herewith given to charge any fees or any shortages in any fees required during prosecution of this application and not paid by other means to Patent and Trademark Office deposit account 50-1199.

Respectfully submitted on May 25, 2010,

/Gudrun E. Hockett/

Ms. Gudrun E. Hockett, Ph.D.
Patent Agent, Registration No. 35,747
Schubertstr. 15a
42289 Wuppertal
GERMANY
Telephone: +49-202-257-0371
US-Fax: (877) 470-9712
gudrun.draudt@t-online.de

GEH